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THE FIRST TREATY ON EXTRATERRESTRIAL SPACE

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THE FIRST TREATY ON EXTRATERRESTRIAL SPACE*

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ABSTRACT. Recapitulation of major space events. Their effect on interhuman and international relations. Aero-space law based on but not analogous to maritime law. Early UN efforts at writing international space treaty on emergency aid, information exchange, responsibilities, ownership, tracking and probes and supplies in space. Disarmament, Nuclear Test Ban Treaty, extension of existing non-aggression and mutual defense pacts. A plea for sanity based on law.

Mr. President, Ladies and Gentlemen:

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I am particularly proud to be in the presence of this Association whose first President was the master of this Association, unforgettable to all, Dionisio Anzilotti, whose influence by far extended beyond the frontiers of your sunny Italy.

To find myself in your company is not only an honor whose value I find impossible to exaggerate, but it is also a great pleasure. You have come to hear what I have to say and this is a true sacrifice on your part. In fact, it will be difficult for me to tell you anything which you do not yet know. The accomplishments of the Italian Law School constitute our joint patrimony regardless of the place of initiation of the magic of international law. I therefore thank you.

The subject I have selected may be called exotic, but since I had to deal with it from a very close range, I wanted you to be privy to some personal observations in this respect.

The great adventure began almost nine and a half years ago. The first sputnik was placed in orbit on October 4, 1957 and began circling our globe.

Since that moment, hundreds of satellites and cosmic vehicles have been launched into space. Their fate has not always been the same. Some followed the trajectory assigned to them and returned to earth, others burned up while passing the high-density layers of the atmosphere and others still continue on their course.

*Lecture given by Prof. Manfred Lachs, judge on the International Court of Justice, on March 17, 1967 to the Italian Society for International Organization, Rome, Venezia Palace.

**Numbers in the margin indicate pagination in foreign text.

From time to time they are joined by new travel companions and this is how these devices created by man have come to populate cosmic space.

On April 12, 1961, the first man in orbit remained 128 minutes in space. Nearly 30 men have followed and have returned healthy and safe to earth.

These are the first chapters of the history of cosmic flight. Man has begun to create his own stars, he has forced his way into space heretofore inaccessible.

And only 40 years ago one of the great scholars of the era stated that the sun is the sole star of the galaxy surrounded by planets. Today we know already that the entire solar system is but a small part of the Milky Way galaxy which, in turn, is one of innumerable galaxies of the cosmos. Each one of them may include thousands of stars.

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Contemporary man has lit the nuclear fire, he has released formidable energies and a force unknown heretofore.

Only yesterday our knowledge of matter and the universe was very limited. Today we possess new means permitting us to penetrate their mysteries. The path is open toward a more complete mastery of the forces of nature.

The balance of the accomplishments of physics, chemistry, astronautics, astronomy and microbiology is impressive. John Boyd Orr, in 1950, wrote correctly that "in the course of the last 50 years science has made more progress than during the 2,000 preceding years and has given humanity greater control of the forces of nature than that attributed by the ancients to their gods."

The years 1950-1966 were characterized by new and immense progress in this domain. This is one of the revolutions which we are privileged to witness. The other are the great social and national transformations.

Release of these powerful forces and the first conquests of space have demonstrated the enormous role of science, the influence it exerts over the conditions of man's life.

All these processes are closely related to each other. They play a determinant role in the formation of interhuman and international relationships. Likewise, their influence on the evolution of contemporary international law is considerable. The institutions which exist under this law call for a new interpretation, new institutions appear, the content of law is enriched daily.

Like an old tree sprouting new branches, international law extends its limits into space which is one of the fundamental dimensions of the judicial system.

As long as the road toward cosmic space had not been opened, international law remained, wherever the nations made direct or indirect contact with each other, within the framework of international exchanges.

Simultaneously with the development of legal rules concerning continents, new chapters of the law of nations made their appearance. The oceans and the seas became important channels of communication. It was necessary to establish universally mandatory principles and rules in their judicial statutes and in matters of navigation.

These principles developed slowly and not without major difficulties. The concept of *mare liberum* is the victorious result of its confrontation with the doctrine of *mare clausum*. Today there is no doubt that the present statute of the open seas results from the specific function it fulfills in commerce and international transportation, its position vis-a-vis the continents which they surround. Particularly with the economic and military interests changing, the waterside nations fostered the evolution of maritime law. /5

However, the conquest of space by man is not confined to terrestrial and maritime lanes, as man has also tried to master aerial space.

However, this legislation should develop much more rapidly because of immense technical progress and the growth of the role of aviation.

The first attempts to codify aerial law were characterized by the attempted analogy with maritime law. Some, launching the theory of freedom of aviation, suggested an approach adapting aerospace to the open seas. Others tried to introduce a structural dualism based on the example of the one which separates the open seas from territorial waters. The third school defended the old principle: *Dominus terrae est dominus coeli ac inferorum*.

A decisive confrontation gave victory to the theory defending sovereignty. This solution was dictated by the concern for security and other interests of state. We thus arrived at the formation of aerial law, concrete standards concerning the legal status of the air vehicle and of the men aboard, jurisdiction and transit.

In pursuing its evolution, international law had to deal with other parts of our globe. Thus the day of rules came concerning the bottom of the seas and special conventions have been completed to protect submarine cables.

Modern technology has permitted man to exploit the natural resources below the bottom of the seas and above all the underwater pools of oil and gas. The concept of the continental shelf was born and construction plans of submarine tunnels have created new problems.

Trips to the north and south poles and the discoveries of their regions have posed new problems. That which heretofore was called *mare congelatum* became of interest to international law as man proceeded to discover its secrets and thus it extended its empire to the Arctic and the Antarctic.

The boundaries of this law increased daily. Finally, its impact covers the whole earth, the surrounding atmosphere, the continental and ocean sub-soil.

It appeared that its limits in space were definitely fixed, that the horizon had been closed.

However, since the early cosmic flights and subsequently the first astronauts' trips, it became clear that studies should be undertaken "regarding the legal problems which may emerge from the exploration and utilization of extraterrestrial space."

The first decisions in this regard were made in the UN as early as 1958. However, serious projects in depth did not begin until 1962. In 1963 the UN General Assembly adopted the first document establishing fundamental legal guidelines for extraterrestrial space. Involved is the Declaration of Legal Principles concerning the attitude of nations in the field of exploitation and utilization of extraterrestrial space, dated 13 December 1963. It ended the era which may be qualified as being the preliminary era of the effort and it may serve as a point of departure for later projects. /6

Three years have gone by, and as a result of the debates of the legal subcommittee in the summer and fall of 1966 and as a result of subsequent negotiations, the first extraterrestrial space treaty came about. This was a treaty on principles concerning the activities of nations in the domain of exploration and utilization of space, the moon and other celestial bodies.

By resolution adopted unanimously by the session mentioned above, on 20 December 1966 the UN General Assembly gave its full support to this treaty. It appealed to the signatory nations to facilitate with the shortest possible delay its signature and ratification; it expressed the hope that the greatest number of nations may adhere to it.

On 27 January 1967 the first signatures were affixed to the treaty in three world capitals. Although its provisions are known, I will recall them here briefly.

The fundamental articles are a translation into treaty language and an implementation and expansion of the principles of the 1963 declaration. Thus, it stresses that the exploration and utilization of extraterrestrial space should be pursued in the interest and for the welfare of all nations, regardless of their economic and scientific development; that the exploration and utilization be made accessible to all nations based on equality, ruling out any discrimination. It confirms in this regard that extraterrestrial space, including the moon and other celestial bodies, cannot be made the object of appropriation and that nations cannot extend their sovereignty thereto.

Adopting these basic principles, it established that any action of nations in space must be in conformance with international law under the

charter of the UN, not only in the interest of maintaining international peace and security, but also to "support cooperation and international understanding."

Going on to the problems of concrete cooperation, the treaty imposes to the nations the obligation of providing assistance to astronauts in case of damage or forced landing on territory of foreign nations or on the high seas. In extraterrestrial space astronauts are expected to render mutual aid and assistance. One special provision concerns the exchange of information regarding the discovery of new phenomena capable of constituting a hazard to the life and health of astronauts.

The treaty provides responsibility for the results of action taken by nations, -- for damages caused on the ground, in the air and in extraterrestrial space.

International collaboration as imposed by the treaty also is reflected in the provision which requires that tests be conducted so as not to infringe upon the interests of other nations and so as not to cause effects or changes which are detrimental to the atmosphere, so as not to place obstacles in the way of peaceful exploration and utilization of space. For this purpose, the treaty sets up consultations. /7

Taking into consideration the legal statute of extraterrestrial space, the treaty could not leave aside the question of the ownership of space vehicles and proper jurisdiction with respect to their crews. The nation where the vehicle launched into space is registered retains the right of property over this vehicle during its sojourn in space, its stay on a celestial body and after its return to earth. It also retains jurisdiction and control over the vehicle and its crew in space as well as while on a celestial body.

Among the new provisions we should mention the commitment made by the parties to the treaty to allow free access to the stations, installations and supplies on the moon and other celestial bodies to the representatives of other nations on a reciprocal basis. The treaty also adopted the important principle of equal treatment reserved for the claims of nations who are parties to the treaty designed to assure them the capability of tracking from earth the vehicles launched by them into space. Well understood, probing stations are involved.

One of the provisions, finally, relates to the most essential questions since it concerns disarmament. It is the interdiction of placing in terrestrial orbit vehicles transporting nuclear arms or other weapons of mass extermination. Thus, the resolution adopted October 17, 1963 by the UN General Assembly is approved in the form of treaty provision. Nevertheless, the treaty goes much farther, since it requires that the moon and other celestial bodies be used exclusively for peaceful purposes. It prohibits the establishment of military bases, installations and fortifications and holding military maneuvers or weapons tests, regardless of their nature. Thus, a considerable step has been taken toward the exclusive peaceful use of extraterrestrial space.

This list deserves being completed by a preliminary provision contained in the 1963 Treaty of Moscow, prohibiting the testing of nuclear weapons in space. We are therefore witnessing a set of standards which guarantee the demilitarization, alas still incomplete, but already quite advanced of space.

In the light of the evolution of modern technology and the resulting risks of the armament race, these standards mark a certain amount of progress, partial to be sure, limited to a single dimension -- the long-range dimension, but it represents no less a contribution to the disarmament cause.

These are then the fundamental provisions of the treaty, sketchy rather than in detail. They show us that an important document is involved. It is the more so, since the treaty is open to all the nations of the world. It is therefore truly universal and 73 countries have already signed. Solid foundations have been laid for the law of space. /8

In connection with these conclusions we might backtrack somewhat to view in closer perspective the balance of the accomplishments made and, from this perspective, engage in some general reflections.

A fundamental legal principle occupies first place here.

We have confirmed that the existent and mandatory system of international law extends its mandatory force to wherever man is capable of going and where the activities of nations find a field of application.

To this end we have stressed the particular role of the Charter of the United Nations. This is correct because the Charter is an integral part of contemporary international law. Thus one may invoke its provisions and demand their implementation to the extent that they are susceptible to being applied to extraterrestrial space.

This was a logical and ineluctable consequence of evolution. It could no longer be a question of placing the new space under the judicial regime of a single nation, it was not necessary to create a new legal system, different from or opposed to that by which nations are ruled in other dimensions. This would furthermore be contrary to the very substance of international law.

What are the consequences of the extension of the field of application of international law to extraterrestrial space?

Involved are not only its principles, i.e. "the principles in force among all independent nations," to quote the words of the Permanent Court of International Justice in the Lotus Case.

Something more is involved. Indeed, the application of international law, such as formulated in international treaties, common law and the general rules of universal law accepted by nations.

However, no automatic extension to extraterrestrial space of international law *in toto* is involved. A whole series of standards are not applicable *ex definitione*. Other standards represent *lex specialis* for different domains or territories. What appeared to be incontestable, in turn, is that many bi- and multilateral treaties had their field of application extended.

Suffice it to point out a single example, that of the nonaggression treaties. Although, according to modern law, they merely confirm a universally mandatory principle, they fulfill a no less important function, since they represent the application *ad casum* of a general standard which they define and apply to their uniting function frequently the obligation of mutual assistance. The parties to these treaties today may request defense in case of aggression coming from extraterrestrial space.

Other international documents concerning the most diverse fields of international relations will demand a broader and perhaps even new interpretation.

Special attention should be given to the extension to extraterrestrial space of the UN Charter. The Declaration qualifies it as part of international law ("international law including the UN Charter"). The reasons why this formula was adopted are evident. The Charter is an integral part of contemporary international law, it expressed the most important principles of this law at the time when it was formulated, it was the Magna Carta of international relations. /9

However, one should not forget that it contains standards of two different types.

The first group includes the standards which confirm the universally recognized rules of international law. This should also include the provisions which modernized or defined existing law. It becomes clear in this context that the application of the Charter to extraterrestrial space signifies in fact the application to space of contemporary international law in the form defined by the Charter. Nations may thus invoke and demand the application of its provisions.

The second group of provisions of the Charter includes those which may be considered *lex ex contractu*. They concern the operation of the organization and its organs (both principle and auxiliary). As contractual standards, they are binding only on the United Nations member nations.

Another observation is necessary with respect to this problem. If we assume that contemporary international law is in force by its very nature wherever human activity and that of nations extend directly or indirectly, the provisions of the treaty are not lawmaking in nature, they are merely declaratory. They merely confirm the evident consequences of accomplishments in science and technology. One may ask whether this was necessary. The answer leaves room for no doubt. The confirmation of the principle and its

legal formulation, in spite of its declaratory nature, is quite important: The principle has gained in clarity and precision. It was necessary to avoid doubts and to forestall erroneous conclusions and a false interpretation.

There is yet another problem which requires elucidation. Involved is the scope of the application of international law including the UN Charter. The Treaty qualifies it as "the activities of nations in the areas of exploration and utilization of extraterrestrial space."

This definition includes a restrictive interpretation.

The term "exploration" determines the principal contemporary activity designed to clarify mysteries which are still numerous in space. This "exploration" in turn opens up the road toward new opportunities called "the utilization" of space. In many areas we have already passed the exploration stage. The experience acquired by science and technology permits adopting concrete and practical measures toward the utilization of space. It is sufficient to mention here meteorology, telecommunications and astronomy.

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Thus, the terms used in the Treaty are not of a restrictive nature. We must see in this a normalizing illustration of the activities of nations. Nations actually have become the depositories of principles and standards of international law, *sensu lato*, without regard for the nature of their activities: whether performed in extraterrestrial space or oriented toward this space or performed in passing through this space.

The principles adopted and the resulting conclusions merely constitute a first step. Others must follow them.

It is necessary to define clearly the legal situation of extraterrestrial space and, consequently, the rights and obligations of nations with regard to this space and within its borders, the same as the statutes of cosmic vehicles and their crews. It has been necessary to resolve in detail the problems of jurisdiction and ownership, assistance to astronauts and responsibility for damages caused by space activities, of the situation of celestial bodies and resources found there. Special solutions must arise in areas such as telecommunications, for example. These are but a few problems among many others which will still increase in number as mastery of extraterrestrial space increases.

Basically an entirely new chapter of international law is involved.

Permit me to continue these reflections. They concern primarily the dual difficulties encountered in the establishment of standards in this new area. Specifically, it is necessary to point out the complications resulting from two causes:

1. The Limited Possibilities of Finding Analogues

In the creative process of law, the legislator frequently bases himself on principles and standards applied to similar or related areas. He resorts to the comparative methods within the judicial system which is his.

Thus, it is not by chance that since the beginning of the formulation of space law, numerous suggestions and propositions have been made for the new standards to be formulated by analogy with chapters already in existence in international law. Examples of the past have been invoked to this end and in particular the experience of international law during the era of the European discoveries in the 15th and 16th centuries.

However, as one goes back in history, one must be aware of the fact that whole centuries separate us from that era. The majority of principles which inspired the European conquerers and the judicial standards which they had formulated today no longer have any *raison d'être*.

It would therefore be risky to envisage the new law *in statu nascendi* in a nonhistoric fashion.

At the same time it is being proposed that in the formulation of this new law, one resort to analogy with maritime and aerial law. But there too, prudence should be used. The mechanical transplant of an institution from one environment to another frequently threatens to disfigure it and thus to serve poorly in the development of a new area of law. /11

Difficulties of this type presented themselves during the formulation of aerial law every time an endeavor was made to equate it to maritime law or even to that of ground transportation. Taking into account the specific traits of each area is the more important as in the past frequently an analogy with domestic law was being sought.

Finally, one should take into consideration the fact that historic changes have led to an essential modification of the methods and procedures of formulating standards of international law.

These are then the factors which act against the excessive resort to analogy. Fortunately, the attempts to model the new law unflaggingly on aerial law has been abandoned.

However, neither may one renounce entirely the analogue approach. Here as anywhere else it remains as an important instrument for the formulation and creation of law. Its usefulness is determined clearly by the experience acquired in the operation of existing standards and by the circumstances in which they developed. In certain situations its application may be fully justified (*ubi eadem ratio, ibi idem jus* -- where there is reason there is law), and in other situations the provisions under consideration may be introduced *mutatis mutandis* (with the necessary changes having been made).

This point of view must predominate as one takes into consideration contemporary international law as a whole, its institutions and acquisitions.

For if space law is to become a branch of this law, it must reflect its most advanced standards, it must aid in the development of international relations in a proper form. In fact there is no doubt that an area is involved which may not be left to arbitrary intentions or to egotistic ambitions of some nations as a terrain of conflict and contradictory interpretation. One should not lose sight of the principal aim which is to be served by the new law. This aim has been defined in the Treaty which proclaims clearly that "the exploration and utilization of extraterrestrial space must proceed in the interest of all the people and all nations, without regard to the degree of their economic or scientific development."

2. The Unknowns of Space

The other difficulty is the large number of unknowns.

In spite of the impressive achievements of contemporary science, they themselves demonstrate how modest our knowledge of the universe really is. The issue is to establish principles and standards for immense expanses and for celestial bodies which man has not yet reached. Our modest knowledge necessarily limits our creative legal capacities. We have as yet not found answers to many questions, two of which appear to be rather essential:

1. Can man live in extraterrestrial space, can he remain there permanently?

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2. Does life exist on other planets?

The first question is connected with the conditions of gravity and cosmic radiation. Early research efforts appear to indicate that these problems may pose an obstacle to the mastery of space by man.

We have well exceeded the limits of the doctrine which viewed the earth as the center of the universe. The horizons of our knowledge regarding celestial bodies have expanded. Scholars presently concentrate their research on three planets of the solar system: Mars, Venus and Jupiter, in addition to the earth satellite Moon.

However, we always lack data. The months and years to come will no doubt cause us to revise the theories adopted so far regarding these and other planets.

If one assumes that life is "a phenomenon common throughout the world," civilizations more or less advanced than ours may exist in the various systems of the universe.

These speculations may be considered pure fantasy, as the contemporaries of Lucrece and Jules Verne judged their visions. Nevertheless, these prospects should not be eliminated even in considerations concerning legal problems. The content of that which is inaccessible today may appear to be the surprise element of tomorrow. This is why the need imposes itself for constant and

close cooperation among those who formulate the new law and the representatives of the natural sciences, particularly in an area which offers so many prospects.

All that should be taken into consideration and at the same time we act within the borders of the knowledge already acquired. The problem nowadays before us is research of legal solutions for space to the extent that they are necessary for the relations between the nations of our globe. This is why the law being formulated has an anthropocentric character, *it was formulated by man and is meant for man.*

Will it always remain so? This question does not provide for a satisfactory answer at this time. The anthropocentric character of this law by no means diminishes and even increases the responsibility of man for the content which he places within this law. Man must guarantee that the new law be instituted in the interest of humanity, that no human activity in space places in jeopardy the security of our globe and life on this globe. Furthermore, he must do nothing which might impair or destroy life in any form under which it exists beyond earth.

These questions lead me to the last reflection which I would like to share with you today.

Man is opening the road toward the universe, he is wresting from nature the mysteries which it jealously guards. All this shows the power available to man. However, these great discoveries and these achievements of contemporary science do not per se constitute a guarantee for the future of humanity to be more radiant, for the destiny of man to be improved.

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For this creative power is likewise a weapon of autodestruction. For the first time in his history, man has the power capable of destroying our entire planet.

At the same time the achievements of science and technology inject themselves more than ever in international relations.

The world has contracted, distances have been reduced, economic and cultural ties among the people have been tightened. Does this mean that the reasons for discord have disappeared, that conflicts have been attenuated? To the contrary. By virtue of the fact that they are now confronting each other directly, their conflicts are more visible, the rapid course of events results in a concentration in time.

It could not be otherwise.

This is why we note today symptoms which are contradictory only in appearance. On the one hand, there are frequent infractions against international law and on the other the range of its action has extended considerably, it follows technology horizontally and vertically, it encompasses the always new areas of international relations. These two phenomena are due to the intensification of contacts among nations, the constant enrichment of the areas which

are the object of international exchanges, to the acceleration of the rhythm of social development, the most intense confrontation ever of life and modern technology: The conquest of space is only one illustration.

This imposes upon us a specific considerable responsibility.

It is not sufficient to yield to this evidence. We must help the world get out of this vicious circle into which it was forced by the philosophy of armaments and we must free politics from the prison into which it was strait-jacketed by military strategy.

Will we take the road which leads to the affirmation of man, will foundations be established, in the form of legal standards which will be respected, so as to assure coexistence and cooperation among nations, among all the people? Or...? The freedom of choice is quite apparent. There is only one possible direction.

Today, in speaking of these questions, on this famous Italian soil, in your splendid capital -- I recall to memory this illustrious master. As it was said so pertinently: "Never was intellectual hunger stronger, never was it satisfied more fully and harmoniously than by Leonardo da Vinci. It was he who glorified it as the common sea of the arts and sciences."

The great men of the Renaissance asked themselves: "Will the world finally liberate us and allow us to extract its secrets?"

Henceforth this is no longer sufficient. Given the great accomplishments of science and technology, we must go much farther. Today, the question which we must answer is the following: "How to utilize the secrets and wealth wrested from nature in order to place them in the service of man?"

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The future cannot be filled solely by space caravels, by the smoking monsters, man cannot live under the sign of death-dealing devices and nuclear explosions. Our actions must be related to the vision of a better world for tomorrow. This requires a total commitment in the great cause of man. This is true not only for political man but also for scientists, physicists, mathematicians and all the others. We can no longer afford the luxury of abstract contemplation. This concerns also jurists.

We can no longer accept the formula of that French diplomat: "We are not here to solve problems, let us be content with handling insoluble questions prudently and the others will conquer themselves." These were the words of the Marquis de Noailles more than half a century ago.

We can no longer permit that our functions be outside the confines of life. Our place is at the center of events: We must seek opportunities of agreement, create new standards and instruments of cooperation so that the law will serve as a solid foundation for international understanding.

Although I spoke of space in the vast context of the interdependence of phenomena, I now return to our globe.

As we resolve these long-range problems, we do so in the context of events which are closer to us. We start at the earth in order to reach the stars, but we always return to earth. And for us who live on this old continent, this means Europe.

I come from a country which for centuries has been tied to yours by bonds of culture and science, a country which is profoundly interested in the construction of the common edifice named Europe.

However, in Europe as elsewhere, the pendulum of history does not move regularly and its laws do not operate automatically. Likewise, it is necessary to help objective reality to open up the road in the right direction. It is incumbent upon man to do so. The instrument he uses is international law which today already performs a major civilizing function in all dimensions.

Let us therefore revert to its most recent branch.

The first treaty based on legal principles concerning the activities of nations in the exploration and utilization of extraterrestrial space including the moon and other celestial bodies is a step in the right direction. In the framework so assigned it must strengthen the role of law and pave the way to peaceful international cooperation in a new and extremely important field of human activities. Furthermore, in the context of the interdependence of events, faced with a complex international situation, it is capable of facilitating other measures leading to a relaxation [of tensions] and understanding. /15

This treaty is not the work of politicians only. The role played by jurists has been significant. It is important wherever the issue is to consolidate the edifice of law, of perfecting its standards and of accelerating its progress.

Is it necessary to stress the specific responsibility incumbent upon us to give the lie in all dimensions to the somber formula which pretends that peace is but a word and represents war in suspense?

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